National Aeronautics and Space Administration
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MARSHALL STAR

Serving the Marshall Space Flight Center Community **June 23, 2005**

Photo by NASA/KSC

The Rotating Service Structure at Launch Pad 39B is ready to enfold Space Shuttle Discovery upon its arrival.

Discovery back at launch pad

By Lynnette Madison

On June 15, Space Shuttle Discovery was rolled out by the giant Crawler Transporter to Launch Pad 39B at Kennedy Space Center, Fla. The four-mile journey, which began at 1:58 a.m., took more than 10 hours. The journey was slowed so engineers could address overheating bearings on the crawler. The Shuttle arrived at the pad at 12:17 p.m.

In the Vehicle Assembly Building, the External Tank (ET-120) and Solid Rocket Boosters which were originally scheduled to fly with Space Shuttle Discovery are now located in high bay 1 being readied to fly with Atlantis. The liquid oxygen feedline bellows heater has been added to the tank and final foam closeouts are progressing.

Prior to rollout, the Shuttle's payload canister – including NASA's Italian-built Multi-Purpose Logistics Module Raffaello – was transferred to the launch pad on June 13. The payload bay doors were

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Mirror, mirror in the sky

Saturn reflects X-rays from Sun, say Marshall scientists using Chandra

By Sherrie Super

When it comes to mysterious X-rays from Saturn, the ringed planet may act as a mirror, reflecting explosive activity from the Sun, according to Marshall Center scientists using the Chandra X-ray Observatory.

The findings stem from the first observation of an X-ray flare reflected from Saturn's low-latitudes, the region that correlates to Earth's equator and tropics.

Dr. Anil Bhardwaj, a Marshall planetary scientist based at the National Space Science and Technology Center in Huntsville, led the study team. The study revealed Saturn acts as a diffuse mirror for solar X-rays.

Counting photons, particles that carry electromagnetic energy including X-rays, was critical to this discovery. Previous studies revealed Jupiter, with a diameter 11 times that of Earth, behaves in a similar fashion. Saturn is about 9.5 times larger than Earth, and twice as far from Earth as Jupiter.

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Marshall offers targeted buyout to eligible employees

By Sanda Martel

The Marshall Center is offering eligible civil service employees an opportunity to retire or resign from federal employment and receive a cash bonus worth up to $25,000. The buyout application period opened June 16 and will close July 15.

The buyout, like the one offered in December 2004, is a "targeted" buyout aimed at rebalancing the Center's work force to align with the current NASA mission. Not all employees are eligible – only permanent employees with at least three years of federal employment. Eligibility also will be based on an employee's primary competency in the Competency Management System; grade; organization; and

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Discovery

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opened June 16, in preparation for payload installation in the payload bay the following day. Payload/orbiter interface testing was to begin early this week.

Preparations have begun for loading of hypergolic propellants – monomethyl hydrazine and nitrogen tetroxide – into the Orbiter Maneuvering System and the Forward Reaction Control System.

The third redesigned External Tank arrived at Kennedy Space Center June 17.

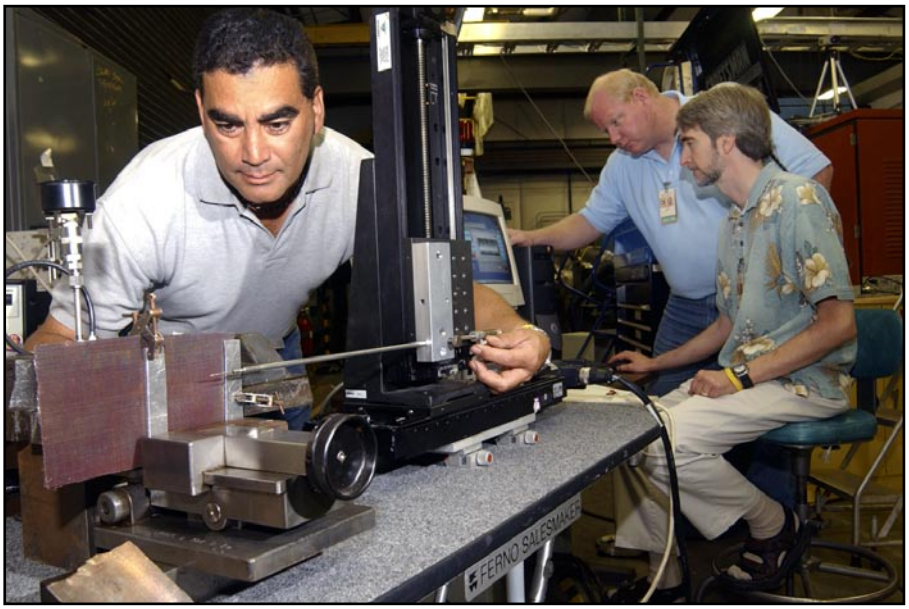
On STS-121, the power-up system testing is nearly complete on Space Shuttle Atlantis, which is housed in Orbiter Processing Facility bay 1, readying for its scheduled September 2005 mission to the International Space Station.

Atlantis' payload bay has been cleaned for flight and the doors closed. Around the hinge line of the doors, technicians have completed installing the tile which makes up the Shuttle's heat shield, or Thermal Protection System. The doors were opened one more time to perform checks of those tiles, and the payload bay doors have been closed for the final time prior to flight.

Technicians continue performing nose and main landing gear cycles on Atlantis to check out compression of the new thermal barrier seals that were added.

The third redesigned External Tank (ET-119) arrived at Kennedy Space Center June 17 and was transferred to the Vehicle Assembly Building June 20. ET-119 is currently scheduled to fly with Atlantis on mission STS-115.

The writer, an ASRI employee, supports the Public and Employee Communications Office.



Martin Cousins, foreground, a mechanical technician with Qualis in Marshall's Engineering Directorate, tests a sample of screen used on the External Tank's diffuser. Behind him, Marshall engineers Dave McDaniels, seated, and Jim Sieja, watch a computer screen to learn how gas velocity changes as it flows through the diffuser sample.

Marshall directs testing that moves Shuttle one step closer to launch

By Lynnette Madison

NASA engineers have spent the past two months testing and running computational models and analyses on two External Tank diffusers to better understand their differences. The information, which will move Space Shuttle Discovery a step closer to its launch, is being processed by engineers and scientists at the Marshall Center.

The External Tank diffuser disperses pressurization gases into the tank once it is filled with fuel prior to flight to help keep it pressurized, allowing the fuel to settle and condense.

Investigation of the diffusers was part of a fault tree — a logical, structured process that can help identify potential causes of a system failure — developed after the April 14 launch systems test on STS-114. During that test, engineers and managers observed an unusual valve cycle count during pressurization of the liquid hydrogen tank on External Tank-120. That tank was fitted with a double weave screen diffuser, not the single weave screen used on previous missions.

The testing and analysis on the diffuser has been a collaborative effort between Marshall Center engineers, Stennis Space Center in Mississippi, and Michoud Assembly Facility in New Orleans, according to External Tank Project Manager Sandy Coleman.

"The combination of systems expertise, analytical modeling and experimental capability has contributed greatly to the resolution of the STS-114 tanking test observation," said Coleman. "It is an example of how working together on this project made an important contribution to this investigation."

In addition to defining test plans and procedures and analyzing test results, Marshall engineers have created models to show how modifications such as the External Tank's new bipod heater affect the tank's operation; how the flow of the liquid propellants react during fueling; and how the diffuser performs during fueling. Marshall also tested samples of the two diffuser screen patterns to gain a better understanding of the differences.

The writer, an ASRI employee, supports the Public and Employee Communications Office.

Marshall Center's Robert Lake Jr. ensures science has a place in space

By Lori Johnston

The Marshall Center's Robert Lake Jr. once dreamed of being the next Frank Lloyd Wright, designing some of the most unique structures in the world. Today, he's an "architect" of a different kind, helping to build one of the most complex facilities ever constructed — the International Space Station.

Lake is helping develop equipment such as science experiment racks for the Space Station — the orbiting research complex that NASA and 15 other nations are building in space.

The facilities are a key element in research that will determine how microgravity — the weightless environment of space — affects living organisms. Results will be used to determine the potential long-term effects of low gravity on humans living for extended periods of time in space.

'The prospect of working on rocket engine tests was too good to pass up.'

— Robert Lake

"If I were the lead systems engineer for a new car project, and this car was supposed to get 50 miles per gallon of gasoline, my job would be to make sure it gets 50 miles per gallon," says Lake. "Similarly, I'm responsible for developing facilities that will perform the job they are meant to do — support research that will contribute to the Vision for Space Exploration." The Vision calls for the Space Shuttles' safe return to flight, to complete the International Space Station and for human and robotic exploration of the Solar System.

Lake grew up in Huntsville where his father, Robert Sr., was a systems engineer for more than 30 years in the Marshall Center's Payload Projects Office. He retired in 1997.

In 1987, during his professional intern program, Lake worked alongside his future father-in-law, Lewis Logan, in Marshall's Orbital Maneuvering Vehicle Project Office. His work involved development of a short-range "space tugboat" that would someday ferry payloads to and from the Space Shuttle and orbiting satellites.

Lake graduated from Lee High School in Huntsville in 1981. After earning a bachelor's degree in electrical and computer engineering from the University of Alabama in Huntsville in 1986, he applied for a job as an engineer at the Marshall Center. "My interview was in the Propulsion Test Area where the Saturn V rocket engines were tested for the vehicle that took the first men to the Moon," says Lake. "The prospect of working on rocket engine tests was too good to pass up."

Lake joined the Marshall Center full time as an instrumentation engineer in the Propulsion Test Division, responsible for measuring and recording the various engineering parameters such as pressure, temperature and voltage for the Space Station thruster test — a small rocket engine test bed for possible use to re-boost the Station's altitude on orbit.

He has since worked on such projects as the Multi-Purpose Hydrogen Test Bed, which tested various technologies for handling liquid hydrogen while in Earth orbit or deep space; the Hydrogen Bearing Tester, used for testing new materials for the bearings used on the liquid hydrogen turbo pump on the Space Shuttle Main Engine; and the Solid Propulsion Test Article, a 48-inch solid rocket motor used to test prospective new materials for the redesigned Solid Rocket Motor.

At NASA, Lake has earned several honors, including the Marshall Center Director's Commendation in 1999 for exceptional innovation and expertise in the development of vacuum test instrumentation systems. He also received a Flight Projects Director's Award in 2003 for outstanding leadership as the lead systems engineer in the development of the Habitat Holding Rack for the Biological Research Project. He earned a NASA Special Service Award in 2004 for his work on that project, as well. Lake earned a Flight Projects Award for exemplifying Marshall Center values to his customers in 2003.

In his leisure time, Lake is an avid cyclist — completing a 100-kilometer race in 2004.

Lake and his wife, the former Julie Logan of Huntsville, and their two children Evan and Bridgett, reside in Huntsville.

Photo by Emmett L. Givens/Marshall Center

Robert Lake Jr. once dreamed of being the next Frank Lloyd Wright, designing some of the most unique structures in the world. Today, he's an "architect" of a different kind, helping to build one of the most complex facilities ever constructed — the International Space Station.

The writer, an ASRI employee, supports the Public and Employee Communications Office.

NASA pilot program asks volunteers to help inspire Alabama students

The National Space Science and Technology Center in Huntsville and the Marshall Center's Office of Academic Affairs are looking for a few good scientists. Also a few good engineers. And technicians. And mathematicians.

A new NASA pilot project — Scientists in Service to Education Reform, or SISTER — pairs professionals working in physics, propulsion and the physical sciences with K-12 educators and students at Alabama public schools. Funded by NASA's Exploration Systems Mission Directorate, the project supports the Alabama Math, Science and Technology Initiative, an effort by the state Department of Education to reform and improve science, math and engineering education across Alabama.

Group representatives will lead a training session July 18-22 at the University of Alabama in Huntsville for qualified volunteers from Marshall and local NASA contractors. Volunteers must attend at least 12 hours of the training, which covers science requirements of typical Alabama schools. Project mentors then will work closely with teachers, introducing physical science modules to participating classrooms. Typically, participants will work one or two hours a day for six to eight weeks — the duration of a typical science module.

"The project will bring fresh perspectives and added zeal for science to Alabama classrooms," said project lead Gregory Cox, senior research scientist in the Earth System Science Center at the University of Alabama in Huntsville, and education and outreach coordinator for the NSSTC. "Those benefits are vital to NASA's goal to inspire the next generation of American space explorers."

A SISTER workshop for selected project participants will take place Sept. 20-23 to kick off the 2005-2006 school year.

For more information about the SISTER project and the training sessions, contact Gregory Cox at 961-7738, or e-mail at cox@nsstc.uah.edu.

For more information about the Alabama Math, Science and Technology Initiative, visit: http://www/amsti/org/

X-rays

Continued from page 1

"The bigger the planet and nearer to the Sun, the more solar photons it will intercept; resulting in more reflected X-rays," Bhardwaj said. "These results imply we could use giant planets like Jupiter and Saturn as remote-sensing tools. By reflecting solar activity back to us, they could help us monitor X-ray flaring on portions of the Sun facing away from Earth's space satellites."

Massive solar explosions called flares often accompany coronal mass ejections, which emit solar material and a magnetic field. When directed toward Earth, these ejections can wreak havoc on communications systems, from cell phones to satellites.

Even as the research appeared to solve one mystery, it fueled others. "We were surprised to find no clear evidence of auroral X-ray emissions during our observations," Bhardwaj said. "It is interesting to note that even as research solves some mysteries, it confirms there is much more we have to learn."

The research appeared in the May 10 issue of Astrophysical J. Letters. The study team also included Marshall's Ron Elsner and scientists from several universities. Bhardwaj is working at Marshall as a National Research Council scholar.

The Marshall Center manages the Chandra program for NASA's Science Mission Directorate in Washington.

The writer, an ASRI employee, supports the Public and Employee Communications Office.

Did you know...

Chandra's operating orbit takes it 200 times higher than the Hubble Space Telescope. During each orbit of the Earth, Chandra travels one-third of the way to the Moon.

Photo by NASA Michoud Assembly Facility

Making improvements

U.S. Sen. Mary Landrieu of Louisiana listens as Ron Wetmore, Lockheed Martin's Return to Flight manager at NASA's Michoud Assembly Facility in New Orleans, points out improvements made to the flange area of the Space Shuttle External Tank since the Feb. 1, 2003, Columbia accident. Lockheed Martin and the External Tank Project Office at Marshall have spent the past two years addressing safety improvements that will minimize the chance of damaging foam and ice coming off during liftoff and climb to orbit. Landrieu toured Michoud June 10.

Those feet were flying!

MARS Running Club members and representatives from the two teams that took first and fourth place in the recent Cotton Row Run Corporate Cup Team competition include, from left, Malone McElroy, Steve Robbins, Teresa Danne, Tom Smith, Richard Booth, Michael Nelson, Sam Ortega, Mike Selby, Ryan Decker, MaryJane O'Rourke, Heather Day, and Edwin Bradley.

NASA TEAM 1, made up of Jay L. Perry, Paul McConnaughey, Paul E. Thompson, Richard Booth and Scott Tillery, took first place with a combined time of 2:07.33. NASA Team 2 — Charles Finnegan, Daniel Schumacher, Jacob Yarbrough, Jose Matienzo and Michael Nelson — took fourth place with a combined time of 2:21.25.

Photo by Terry Leibold, NASA/Marshall Center

Buyout

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Office of Personnel Management position title. A link to approved targeted competencies and associated eligibility criteria is at: http://www1.msfc.nasa.gov/INSIDE/announcements/2005buyout.html

Employees with questions about their eligibility should contact their administrative officer.

If the number of buyout applications exceeds the buyout limit established for a particular competency, approval will be based on the following "tiebreaker" criteria, in priority order: grade levels GS-14 and GS-15; eligibility for optional retirement; eligibility for early-out retirement; and federal service computation date.

The buyout is one step among many that the Marshall Center is taking to rebalance its work force to better support the NASA space exploration mission. Following a strategic work force review in 2004, a targeted buyout was offered last December and accepted by 76 employees. Up to 174 employees will be able to take advantage of this current buyout offer. Those who do so must separate from the federal service no later than Sept. 30, 2005.

McGrath to speak to Marshall Association June 30

Dr. Melissa McGrath, deputy director of the Marshall Science and Technology Directorate, will speak at the Marshall Association luncheon at 11:15 a.m. June 30 at the Redstone Officer's and Civilian's Club.

McGrath came to Marshall in January, formerly serving at the Space Telescope Science Institute where she achieved the rank of Full Astronomer while working as project manager, support scientist and/or principal investigator and research scientist for numerous space instrument programs, including the Hubble Space telescope. Her contributions are well recognized, including the Bennett Prize in physics.

The luncheon is $7.50, payable at the door. Please contact Tom Fleming by e-mail or at 544-3962 to make a reservation before noon June 28.

Saturn/Apollo Reunion is July 23

The second annual Saturn Apollo Reunion will be held from 6-8 p.m., Saturday, July 23, at the U.S. Space & Rocket Center in Huntsville. Apollo 17 astronaut Eugene Cernan, the last man on the Moon, will be the featured speaker. Adult admission of $25 and children $10 includes a barbecue dinner, live entertainment and access to the Space & Rocket Center Museum and Rocket Park. All proceeds will benefit the Saturn V restoration project. For more information, call 256-837-3400.

Photo by David Higginbotham/Marshall Center

'Walk for the Health of It'

About 275 Marshall employees joined the Health and Fitness Expo's "Walk for the Health of It" June 15. The Office of the Chief Counsel received an award for having the highest percentage of employees to participate in the one-mile walk. The Space Systems Programs/Project Office and the Science and Technology Directorate joined forces and won the trophy having the highest number of employees participating in the Annual Employee Walk.

Return to Flight Task Group plans final public meeting/briefing

The Stafford-Covey Return to Flight Task Group is scheduled to conduct its final public meeting at 1 p.m. EDT Monday, June 27, at the Residence Inn Capitol, 333 E Street SW, Washington. The meeting will be followed by a 4 p.m. EDT news conference, across the street at NASA Headquarters. The news conference will be carried live on NASA Television.

The group plans to complete its assessment of NASA's implementation of the 15 Space Shuttle Return to Flight recommendations of the Columbia Accident Investigation Board (CAIB). The meeting date is contingent on NASA completing its internal review milestones and providing information the Task Group requires to complete its deliberations.

Live audio of the meeting will be available on the Internet at: http://returntoflight.org

The participants are Return to Flight Task Group Co-Chairman Richard O. Covey, Technical Panel Lead Joseph Cuzzupoli, Management Panel Lead Dr. Daniel L. Crippen, and Operations Panel Lead Col. James C. Adamson.

The briefing also will be video-streamed live on the Internet at: http://www.nasa.gov/ntv

More information on Return to Flight TaskGroup is on the Web at: http://returntoflight.org

Photo by Terry Leibold/Marshall Center

NASA welcomes Explorer School

Marshall Center Deputy Director Charles Chitwood congratulates students and teachers during a recent celebration at Hobgood Elementary School in Murfreesboro, Tenn. The event marked the school's selection as a 2005 NASA Explorer School — one of only 50 schools in the United States chosen this year for a three-year partnership with NASA. Explorer Schools promote science, mathematics, engineering and technology.

Obituaries

William A. Landers, 72, of Decatur, died June 6. Mr. Landers retired from the Marshall Center in 1990 as an aerospace engineer.

Survivors include his wife, Margarete K. Landers; one son, Michael Landers; and three daughters, Robin Glover, Lee Ann Chappell and Heather Dilmore.

Eugene West, 87, of Huntsville, died June 11. Mr. West retired from the Marshall Center in 1967 as a developmental assembler.

He was also a World War II veteran.

Survivors include his wife, Doris Blankenship West; and one daughter, Patsy Rains.

John H. Blackstone, 80, of Huntsville, died June 14. Mr. Blackstone retired from the Marshall Center in 1974 as an aerospace engineer.

He was also a World War II veteran.

Survivors include two sons, John Michael Blackstone and William David Blackstone Sr.; and one daughter, Dorothy Anne Blackstone Bradley.

Gerald A. Davis, 81, of Decatur, died June 15. Mr. Davis retired from the Marshall Center in 1980 as an electrical engineer.

He was also a World War II veteran.

Survivors include his wife, Betty Tucker Davis; one daughter, Linda A. Rapp; and two sons, Mark D. Davis and Dale E. Davis.

Eva C. Parker, 57, of Huntsville, died June 16. Ms. Parker retired from the Marshall Center in 1992 as a resources control clerk.

Survivors include her brother, William Charles Parker; and half-brother, Melton S. Parker.

Classified Ads

To submit an ad to the Marshall Star, go to Inside Marshall, then go to News Sources, click MSFC News, click Submit Marshall Star Classified Ads, fill out the form and do a submit at the bottom. Also, you may e-mail your ad to Intercom. Ads are limited to 15 words including contact numbers. No sales pitch, i.e., "like new" or "excellent condition."

Miscellaneous

Two Yamaha NS-6390 speakers, $60; Mission style headboard, queen size, $75. 655-6293

Weider Pro 9940 home gym, delivery & setup included, $200. 256-536-3390

Four Mustang LX aluminum wheels w/center caps, 10-hole, 15x7, 4-lug, $90. 714-0276

White metal screen door w/sliding window insert, $25. 883-2468

Highboy, 2-drawer, Cherry, $50; HP1300 printer, $200. 882-3326

"DR" Field & Brush mower, 1 yr. old, 11HP, electric start, $1,700. 771-7799

iPOD 20MB w/FM transmitter, $175. 656-7997

Oak dining table w/6 chairs, $850; Oak hutch w/glass doors, $200; chain-link dog run, $400. 777-2027

Murray mulching mower w/Tecumseh, 5HP, walk-behind drop feeder, $60. 828-6213

Pearl snare drum w/case, sticks, pad, stand, key, lesson books, $150. 882-6449

Diamond cluster heart-shaped ring, $100. 683-1279

Chevy 350 Turbo transmission, recently rebuilt w/Kevlar bands & B&M shift kit, $795. 797-8895

Waterbed, queen, softside, $200. 883-1003

Mossberg 835 3-1/2" Realtree camo w/choke tubes, matching slug barrel & scope, 3-yrs. old. 256-593-7207

Sunbeam gas grill, two full gas tanks included, $60; General Electric TV, 19", $30. 895-9520/Philip

Craftsman push lawnmower, 22", 6.6HP, $50; five-drawer chest, antique green, $50. 880-9171

Electric two-wheel red scooter w/battery charger, $75. 828-0756

Leather sofa & love seat, beige, $375 for pair. 931-571-3703

Viking Husqvarna sewing machine & cabinet, $125; Pfaff sewing machine, $125. 656-2951

AKC/CKC Maltese puppies, 5 females, 1 male, ready 7/02/05, call for price/deposits. 797-0408

Toddler bed, natural finish, slated headboard & footboard, two curving top rails, mattress included, $60. 256-468-9874

Brown electric push button operated lift-chair, $200. 883-9509

Pennsylvania House video cabinet, Cherry, holds up to 30" TV, VCR/DVD, $750. 931-427-2059

Glass and wood sofa table and curio shelf, $135 each; heart-shaped bedroom slipper chair, $30. 922-9311

Barbie Power Wheels Sunjammer jeep, $40; Power Wheels Harley Davidson motorcycle, pink & purple, $40. 214-0110

Protocol luggage set, 4-piece, floral pattern, $50. 520-3874

Queen double-sided pillowtop mattress set & mattress pad, $50. 859-9204

Wedding dress w/veil, size 8, $125; baby monitor, $25; Craftsman powered workbench, $300. 776-9165

Vehicles

2001 Yamaha V-star 650 motorcycle, 1,600 miles, saddlebags, windshield, running lights, backrest, $4,250. 420-8074

1999 BMW 328iC, white, gray leather, power top, 5-speed, Premium/Sport & H-K, 86K miles, $18,000. 837-1035

1985 GMC Jimmy, small SUV, 57K miles, 28mpg, $2,995. 837-1774

1978 Silver Anniversary Corvette, red interior, appraised mint, 41.2K miles, $17,500. 852-5628

1996 Mercury Mystique, automatic, new transmission, tires & battery, trade for trailer or 4-wheeler, $2,500. 256-216-8868

1986 Nissan 300ZX setup for Chevy V8 and transmission. 797-8895

1996 Dodge 1500 pickup, standard cab, 54K miles, new paint, chrome wheels, $7,475. 256-348-1345

Skeeter Fish & Ski, SL185, 18'x6", trolling motor, GPS, depth finders, ski equipment, $15,750. 256-508-1789

HD2002 Sportster 883R Limited Edition w/extras built on, 7.5K miles, $5,600. 509-9550

2003 Nissan Pathfinder, V6/auto, 2WD, tow package, 4-door, 26K miles, CD, silver/charcoal leather, $22,500. 880-3337

2001 F150 Lariat, Supercab, red/tan, many extras, 60K miles, $15,000. 881-9753

1998 Ford Contour, 4-door, auto, dark green, $3,000. 256-773-9273

1997 Ford Explorer XLT, beige, 73K miles, pw/pdl/cd, abs, auto, new shocks, $6,500. 256-653-5731

1995 BaJa 17.5' ski boat, 115HP Suzuki motor, all accessories, $6,000. 325-2070

1993 Dodge Ram B350, 15-passenger van, 126.3K miles, 5.9L/V8, $1,650. 426-7580

1999 BMW M3, 5-speed, power sunroof, AM/FM CD/cassette, ground effects, 86K miles, $18,500. 256-679-2052

2003 Yamaha V-Star Silverado cruiser, 3K miles, windshield, saddle bags, $5,900. 350-2782

2003 Toyota Celica GT, 40K miles, 5-speed, black, CD/cassette, all-power, sunroof, cruise, $14,900. 694-0034

2002 Ford F250 Lariat crewcab, white, 136K miles, 7.3 diesel, 4WD, gooseneck, $22,000. 256-497-3518

1991 Honda Accord LE, champagne, 5-speed manual, rear spoiler, 142K miles, $2,100. 256-881-4148

Wanted

Canoe and/or kayak in good condition. 221-0644

Stationary bike system. 256-656-5552

Old motorcycles or parts, from the 1950s to 1970s, running or not. 509-3559

Free

Henry Detmer upright piano, needs tuning, you haul it. 256-859-7809

Terrier mix, spayed, 5 yrs. old, shots up to date, good w/kids, needs fenced yard. 837-5054

Medium sized dogs: male, 2 yrs. old; spayed female, 18-months old; adoption premium. 656-6755

Black Lab & Chow mix, 1 yr. old, dog house.

Mixed Blue Heeler/Dalmatian, neutered male, 2 yrs. old, shots current, crate trained, watch dog. 859-0729

To good home, 6 month old female Walker Hound. 577-4327

Lost

Gold Nikken bracelet, approximately 2 weeks ago. Call Irene at 544-8877 if found

Chief Information Office seeking customer feedback

The Office of Chief Information is seeking feedback about customers' experiences when requesting technology products and services. Information is being gathered through an online survey that began June 14 and will continue through July 1.

Employees who haven't completed the survey are encouraged to visit: http://cio.msfc.nasa.gov/cea/survey.html and record their experience when interacting with the CIO Office for IT product and service needs. Suggestions to help the Office of Chief Information Officer become a better service provider also are requested. The survey takes 10-15 minutes to complete and responses will remain anonymous.

For questions or comments, contact David Earnest at 544-3715 or Steve Celuch at UNITes at 544-3577.

Marshall alloy team wins automotive award

Two Marshall Center employees have received an environmental award from the Society of Automotive Engineers for their work on NASA's High-Strength Aluminum Alloy, also known as MSFC-398.

Lee

Jonathan Lee, a structural materials engineer in Marshall's Materials, Processes and Manufacturing Department, and Sammy Nabors, Marshall commercial technology manager in the Engineering Directorate, received the organization's first-place Environmental Excellence in Transportation Award during a recent ceremony in Washington, D.C. Po Shou Chen, a scientist with Morgan Research Corporation of Huntsville, Ala., also a co-inventor, shared the award with Lee and Nabors.

Lee and Chen developed MSFC-398 in the 1990s at the request of a major automobile manufacturer searching for an alternative material for engine pistons. The alloy is much stronger than conventional alloys — withstanding temperatures up to 750 degrees Fahrenheit. This higher strength alloy has enabled the development of a new breed of high-performance pistons that may improve gas mileage and help reduce emissions.

Nabors worked with Research Triangle Institute of Raleigh, N.C., to make the NASA technology available to industry, and Bombardier Recreational Products of Sturtevant, Wis., adapted the technology to manufacture pistons for its Evinrude E-TEC engine. The company projects that 700,000 pistons will be manufactured using MSFC-398 over the next five years.

Also recognized during the award ceremony were Molly Dix of Research Triangle Institute in Raleigh, N.C.; and Patrick Tetzlaff, Jim Bonifield and Serge Thibault, all of Bombardier Recreational Products in Sturtevant, Wis.

Additional licensing agreements are in place for MSFC-398. Spartan Light Metal Products of Sparta, Ill., will produce handheld, gas-powered hand tools and lawn and garden equipment with less than 12.5 horsepower. That company also has a license to manufacture automotive power-train components such as cylinder liners and transmission pumps.

Nabors

Two other license agreements have been signed and another is pending with PAC Materials of Huntsville. Additional license agreements for MSFC-398 are being negotiated with other companies.

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